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Designing projects for motivating students towards scientific exploration: Appication to student mentoring

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Designing projects for motivating students towards scientific exploration: Application to student mentoring

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Every summer in the National Ignition Facility (NIF) at Lawrence Livermore National Laboratory students are brought in to gain interesting research/development experience. In this work, we will review some case studies of past research experience with students, that led to successful journal and conference publications. Several of these works will be reviewed to demonstrate how the problem was chosen and defined so that meaningful results could be obtained within a limited time frame. It is anticipated that success with such projects will go a long way in motivating students in their future graduate career. Projects from laser measurement, optical computing and matched filtering will be reviewed to demonstrate this approach.

Short summary: Every summer the National Ignition Facility (NIF) at Lawrence Livermore National Laboratory (LLNL) students are brought in to gain interesting research/development experience. In this work, we will review some case studies of past research experience with students, that lead to successful journal and conference publications.

Key words: Optical design, pattern recognition, Laser alignment, image processing, correlation, matched filtering.

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